

# Productivity knocks

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Levelling up with social  
infrastructure investment

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# Executive Summary

The government won a decisive victory at the December 2019 election, assisted in no small part by the thousands of voters in Northern 'red wall' constituencies who switched to the Conservatives for the first time.<sup>1</sup> Prime Minister Boris Johnson has promised to 'unite and level-up' the UK, recognising the link between places that have been 'left behind' and the Brexit vote in 2016.<sup>2,3</sup> With a large majority, this government is now in a position to address these regional inequalities and appears willing to increase public spending to get there.<sup>4</sup> This report argues that investment in social infrastructure is essential for levelling-up the UK due to its long-run economic returns. It must be prioritised as part of this re-balancing agenda, as place-based inequalities in areas such as health, skills and education are central to understanding and addressing the distribution of economic deprivation across the country.

## Why social infrastructure?

The term social infrastructure has increasingly been used to elevate the status of investment in a combination of activity which has previously been regarded as soft or intangible. Broadening the understanding and application of economic policy by integrating social policy and investment in social infrastructure, is critical to addressing the underlying structural causes of deprivation. Areas in England which both voted for Brexit in 2016 and switched their vote to Conservative in 2019 are, for example, in need of investment to tackle higher rates of looked after children and suicide.<sup>5</sup>

We define social infrastructure as the systems which enable society to work effectively. This is broadly in line with other working definitions and includes areas such as early years, mental health and housing. Whilst investment in social infrastructure has many benefits for inclusive growth and economic wellbeing, we focus on a subset of social infrastructure for which there is an existing body of literature demonstrating its economic

impact in terms of productivity.<sup>6</sup> Based on previous literature, we have found that the productivity returns to social infrastructure investment are comparable to that of physical infrastructure.

The term social infrastructure has increasingly been used to elevate the status of investment in activity which has previously been regarded as soft or intangible

## Previous evidence on the productivity benefits of social infrastructure

- **Skills:** NIESR find that upskilling accounted for around 20% of total labour productivity growth between 2002 and 2007.<sup>7</sup>
- **Health:** The Northern Health Science Alliance estimate that reducing the number of people with long-term health conditions in the North could increase annual GVA by £13.2bn.<sup>8</sup>
- **Mental health:** The King's Fund estimate that untreated mental health disorders led to £26.1bn of lost earnings in 2007. They argue that improving access to treatment would be beneficial for society but that there is little motivation to do so as savings do not accrue to the NHS.<sup>9</sup>
- **Childcare:** Quebec's universal low-fee childcare programme is estimated to have increased female workforce participation by 3.8% in 2008, increasing Quebec's GDP by 1.7% or \$5.1bn as a result.<sup>10</sup>
- **Early years:** Evaluations of the UK Sure Start programme, found that it reduced child poverty and increased maternal wellbeing, but had smaller than expected economic benefits at £300-£600 per child in the scheme.<sup>11</sup> More recent research by the IFS has found that the Sure Start programme reduced hospitalisation of 10-11 year old children by 30%, suggesting that the

1 The BBC's election coverage is available at: <https://www.bbc.co.uk/news/election-2019-50771014>

2 From the PM's speech on his return to Downing Street on 13 December 2019. Available at: <https://www.gov.uk/government/speeches/pm-statement-in-downing-street-13-december-2019>

3 Local Trust (2019) *Left behind? Understanding communities on the edge*. Available at: [https://localtrust.org.uk/wp-content/uploads/2019/08/local\\_trust\\_ocs\\_i\\_left\\_behind\\_research\\_august\\_2019.pdf](https://localtrust.org.uk/wp-content/uploads/2019/08/local_trust_ocs_i_left_behind_research_august_2019.pdf)

4 Khalif, R. et al. (2020) *Forget staying close to EU after Brexit, chancellor tells business*. Available at: <https://www.ft.com/content/18ddc610-3940-11ea-a6d3-9a26f8c3cba4>

5 CPP analysis based on ONS and DfE statistics of constituencies in the Midlands and North of England which changed from Labour to Conservative in 2019. Data is based on the local authority in which most of the constituency population live. Results for the 2019 election and EU Exit referendum are available online in the House of Commons Library: <https://commonslibrary.parliament.uk/parliament-and-elections>

6 This should not detract from a broad definition of social infrastructure as the systems which enable society to work effectively, which can also include recreational activities, green spaces and community groups; see Box 1 for more detail.

7 Aznar, A. et al. (2015) *UK skills and productivity in an international context*. Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/486500/BIS-15-704-UK-skills-and-productivity-in-an-international-context.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/486500/BIS-15-704-UK-skills-and-productivity-in-an-international-context.pdf)

8 Bamba, Munford, Brown et al (2018) *Health for Wealth: Building a Healthier Northern Powerhouse for UK Productivity*. Northern Health Sciences Alliance, Newcastle. Available at: <https://www.thenhsa.co.uk/app/uploads/2018/11/NHSA-REPORT-FINAL.pdf>

9 The King's Fund (2007). *Paying the Price: The cost of mental health care in England to 2026*. Available at: <https://www.kingsfund.org.uk/publications/paying-price>

10 Figure in 2008 prices. Fortin, P. et al. (2012) *Impact of Quebec's Universal low-Fee Childcare Program on Female Labour Participation, Domestic Income and Government Budgets*. Available at: <https://www.childcarecanada.org/documents/research-policy-practice/12/04/liimpact-des-services-de-garde-%C3%A0-contribution-r%C3%A9duite-sur-1>

11 DfE (2014) *Evaluation of Children's Centres in England (ECCE) The extent to which centres 'reach' eligible families, their neighbourhood characteristics and levels of use*. Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/318227/RR358\\_-\\_FINALrevisedReachReport07042014.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/318227/RR358_-_FINALrevisedReachReport07042014.pdf)

full economic benefits of the programme were not captured by the initial evaluation.<sup>12</sup>

- **Social care:** The MHCLG evaluations of the more contemporary ‘Troubled Families’ programme found it to deliver £2.28 of economic benefits for every £1 spent.<sup>13</sup>

The findings show that the productivity return from investment in social infrastructure has potential to be sizeable. By comparison, the most significant transport investment in recent years, HS2, is expected to have up to £15 bn a year in productivity gains if the full network is completed.<sup>14</sup> A more localised investment such as improving transport links in Leeds City Region is estimated to have annual productivity benefits of £68m-226m, including user benefits.<sup>15</sup> These estimated benefits are large but do not outweigh the potential returns from social infrastructure investment. For example, the £26bn to be gained each year from improving access to mental health treatment plans and preventative care or the £13bn boost to GVA from improving ill-health in the North.

**Figure 1: Evidence summary – the productivity returns on social infrastructure investment<sup>16</sup>**

Infrastructure type	Potential annual productivity gain (£bn) <sup>17</sup>	Economic gain per £1 spent (£)	Per person lifetime productivity gain (£)
Education & skills	-	-	176,000-283,000
Physical & mental health	11.3-33.9	-	-
Child & social care	2.6	2.28	279-557
Transport	0.1-15		

### Why social infrastructure investment has been neglected

Despite the evidence, the economic returns to social infrastructure are often overlooked. This is for a number of reasons:

- 1 Spending allocations are subject to political influence, yet the economic impacts of social infrastructure investment are not widely acknowledged by politicians or policymakers.** The Green Book’s marginal economic analysis is ill-suited for assessing Spending Review allocations, as it does not allow for the economic impact of non-marginal,

transformational programmes. Lack of clarity over how to account for such effects heightens the importance of political influence, and disadvantages social infrastructure projects in the Spending Review process as the Treasury tends to fall back on established economic argument.

- 2 Social infrastructure is by nature cross-cutting whilst department allocations are not.** The benefits of social infrastructure are often broad-based or do not accrue to the same department that makes the investment. This can discourage investment in social infrastructure as planned spend is typically allocated to individual departments rather than to projects or policy areas.
- 3 The time horizon for government planning is too short to account for the benefits of social infrastructure.** It is difficult to account for social infrastructure’s long-term benefits through the Spending Review process, which refreshes every few years in response to four to five-year political cycles.
- 4 Government expenditure is allocated without recognition of the assets created.** Spend is allocated using the resource accounting and budgeting (RAB) accounting system which does not include the assets created or maintained by social infrastructure investment or the liabilities it may help to avoid. The Whole of Government Accounts (WGA) are considered in OBR’s fiscal sustainability report, but rarely inform spending decisions. Even the WGA, which covers all public assets and liabilities, often undervalues physical social infrastructure assets such as housing or public land.
- 5 Much social infrastructure is not physical capital.** Social infrastructure describes the systems which enable communities to prosper, and whilst it includes some physical assets such as buildings, it is also made up of human capital, and public services. The current framework for assessing public expenditure is ill-equipped to account for long-term returns of non-capital spend and this puts social infrastructure at a disadvantage.
- 6 Productivity impacts are less commonly included in appraisals of social infrastructure projects.** Whilst productivity impacts are mentioned in the Green Book, there is little supplementary guidance on how to apply these outside transport and housing. Where productivity is discussed, it is often not related back to the wider economy. This reinforces the framing of social infrastructure as ‘soft’ and external to the growth process, diminishing its perceived importance.

12 Cattan, S. et al. (2019) *The health effects of Sure Start*. Available at: <https://www.ifs.org.uk/publications/14139>  
 13 MHCLG (2019) *National evaluation of the Troubled Families Programme 2015 to 2020: findings*. Available at: <https://www.gov.uk/government/publications/national-evaluation-of-the-troubled-families-programme-2015-to-2020-findings>  
 14 Economic Affairs Committee (2015) *The Economics of High Speed 2 - Chapter 6: will HS2 stimulate economic growth?* Available at: <https://publications.parliament.uk/pa/ld201415/ldselect/ldconaf/134/13410.htm>  
 15 Table 3 in Centre for Cities (2007) *The case for better transport investment: Agglomeration and growth in the Leeds City Region*. Available at: <https://www.centreforcities.org/wp-content/uploads/2014/09/07-11-27-The-case-for-better-transport-investment.pdf>  
 16 This table collates these figures for illustrative purposes although it should not be used to draw direct comparisons. Research findings are expressed differently across disciplines and are not always available in each format. For ease of reference the prices are in the year of publication rather than in 2020 prices.  
 17 The £2.6bn referred to under Childcare and social care is \$5.1bn at 2008 exchange rate of 1.96. See: <https://www.canada.ca/en/revenue-agency/services/forms-publications/previous-year-forms-publications/archived-rc4152/archived-average-exchange-rates-2008.html>  
**Productivity knocks: Levelling up with social infrastructure investment**

## High level principles for an integrated spending system

Levelling-up the UK will require an integrated approach to social and economic policy. Government must recognise the long-term economic benefits of social infrastructure and prioritise strategic investment in the public services and social policy systems that enable communities to thrive while boosting the economy at the same time. We suggest that any approach is based on the following high-level principles and will work to develop this agenda in the coming months.

- 1 Taking a place-based approach.** Government should trial a move to place-based rather than departmental budgeting where local leaders can have full flexibility and accountability. The current business rate retention pilots could provide a platform for testing new models of appraisal for social infrastructure projects.<sup>18</sup> CPP will be publishing a paper on local government finance following mayoral elections in May and working alongside other organisations on the Future of Devolution later this year.
- 2 Considering the long-term.** Investment strategy should be set over a 10 to 15 year period rather than the current two to four. The five-year rail control periods implemented by the Department for Transport, effectively allow a 10 year lead period and could provide a useful model for wider investment.<sup>19</sup>
- 3 Accounting for assets.** Government should report changes in assets, as measured by the WGA, alongside traditional economic measures in the Budget and use the WGA to inform long-run spending decisions.
- 4 Thinking beyond capital.** Investment in the non-capital elements of social infrastructure should be on an equal footing with capital investment. Government could, for example, introduce a new category in government accounting to capture resource spending which is preventative and or has predominantly long-term benefits.
- 5 A level playing field for project appraisal.** Departmental guidance should be updated in line with the 2018 Green Book and should include or reference advice on estimating the productivity impacts of social infrastructure. The level of detail should be on a par with current WebTAG guidance. This would encourage the inclusion of productivity impacts, including labour supply effects, in the appraisal of social infrastructure projects on a routine basis.

Levelling-up the UK will require an integrated approach to social and economic policy. Government must recognise the long-term economic benefits of social infrastructure.

<sup>18</sup> For more information on existing pilots see: <https://www.gov.uk/government/publications/75-business-rates-retention-pilots-2019-to-2020-prospectus/frequently-asked-questions>

<sup>19</sup> House of Commons Transport Committee (2018) *Rail infrastructure investment Fourth Report of Session 2017–19*. Available at: <https://publications.parliament.uk/pa/cm201719/cmselect/cmtrans/582/582.pdf>

## Introduction

The new Chancellor will soon reveal the steps his 2020 Budget will take to ‘level-up’ prosperity across the UK regions. The government has recognised growth and prosperity as the major challenges for the UK economy, and has plans to increase capital spending in order to raise productivity and reduce inequality, including through the UK Shared Prosperity Fund.<sup>20,21</sup> The focus on reducing regional imbalances is welcome but not sufficient; an urgent rethink of existing mechanisms is required. To date, transport infrastructure investment has dominated the headlines, but capital spend alone will not level-up the economy.<sup>22</sup> Deprivation in the UK is associated with significant health and education inequalities. Children living in newly Conservative ‘Red Wall’ areas, for example, are 34% more likely to be in care than the average English child, whilst adults are more likely to commit suicide and live fewer years in good health (see Figure 2). Tackling these regional imbalances will require policymakers to consider the need for social and physical infrastructure together.

The ONS recently reported that our sense of belonging to our neighbourhoods has decreased since 2014 and organisations such as Local Trust and NPC have argued that local social infrastructure is key to reviving struggling towns.<sup>23,24</sup> Local Trust research finds that social infrastructure, not spending power, is the main differentiator between ‘left behind’ towns and others.<sup>25</sup> CPP research finds that healthy life expectancy is a key indicator of economic differences between local authorities - with a range of 16 years across areas - and that health itself is socially determined; affected by inequalities in education, income, employment, crime and housing.<sup>26,27</sup> This demonstrates the importance of social infrastructure - related to housing, skills and beyond - in tackling health, wealth and income inequalities across the UK. The Conservative Party’s 2019 manifesto explicitly acknowledges the existence and needs of ‘left behind’ areas and commits to spend £500m on youth clubs and services and £250m on civic infrastructure. This indicates that the government do recognise the social value of such investment. However, for this recognition to be translated into a new framework for achieving inclusive growth, they must also recognise the long-term economic value of investing in social infrastructure; including the productivity benefits of improving public health, skills and early years care.

**Figure 2: Social infrastructure investment is needed to tackle endemic deprivation in Red Wall constituencies that voted Conservative in 2019<sup>28</sup>**

	Outcome measure	England average	Conservative Red Wall average	Difference to England average
Education & skills	Percentage who attained Level 3 at 19 (2018)	57	53	-7%
Physical health	Healthy life expectancy at birth (2016-18)	64	61	-5%
Mental health	Suicide, rate per 100,000 (2016-18)	9.6	10.5	9%
Early years	Percentage achieving a GLD at end EYFS, (2019)	72	70	-2%
Social care	Looked after children, rate per 10,000, (2019)	65	87	34%

This paper sets out the benefit of social infrastructure investment to the economy. This is intended to enable its direct comparison with investment in physical infrastructure such as transport, for which the economic benefits are already commonly understood. In particular, it reviews the available evidence on the potential for social infrastructure to increase the productive capacity of the workforce. It then considers how government processes for allocating resources may have led to social infrastructure investments being neglected. Finally, it calls on government to consider how it will address these issues ahead of the 2020 Spending Review.

20 See Javid’s interview with the Financial Times on 17/01/20, available at: <https://www.ft.com/content/18ddc610-3940-11ea-a6d3-9a26f8c3cba4>

21 Parliament (2019) *The UK Shared Prosperity Fund*. Available at: <https://researchbriefings.parliament.uk/ResearchBriefing/Summary/CBP-8527>

22 Since the start of the year the government have made numerous announcements related to HS2 and other infrastructure initiatives. For examples see: <https://www.gov.uk/government/speeches/a-new-chapter-for-northern-transport> and <https://www.gov.uk/government/news/major-boost-for-bus-services-as-pm-outlines-new-vision-for-local-transport>

23 ONS (2020) *Social capital in the UK: 2020*. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/bulletins/socialcapitalintheuk/2020>

24 Corry, D. (2019) *Build on the social aspect of towns*. Available at: <https://www.themj.co.uk/Build-on-the-social-aspect-of-towns/216691#>

25 Local Trust (2019) *op cit*

26 The variation of healthy life expectancy across the UK is discussed in CPP’s 2019 report *The Good Life: Measuring inclusive growth across communities*. Available at <https://www.progressive-policy.net/publications/the-good-life-communities>

27 Dudding, J. et al. (2018) *Beyond the NHS: Addressing the root causes of poor health*. Available at: <https://www.progressive-policy.net/publications/beyond-the-nhs-addressing-the-root-causes-of-poor-health>

28 CPP analysis based on ONS and DfE statistics. Conservative Red Wall average includes 44 constituencies in the Midlands and the North of England whose elected representative changed from Labour to Conservative in 2019. Data is based on the local authority in which most of the constituency population live.



# Chapter 1: How social infrastructure investment benefits the economy

Economic and productivity growth is important for achieving shared prosperity. Investment in physical infrastructure is broadly accepted as a means of increasing productivity and in this chapter, we argue that investment in social infrastructure can also be expected to benefit the economy.

## Physical infrastructure investment and productivity growth

Economists broadly agree that government spending on capital has a greater impact on productivity and GDP growth than general public spending, although the return on capital is not uniform. Physical infrastructure, as a form of capital investment, is considered to positively impact productivity and GDP. Recent empirical research by the UCL's Institute for Innovation and Public Purpose (IIPP) confirms this effect, finding that government capital investment in the US, including on infrastructure projects, had a GDP multiplier of 2.12, whilst consumption based spend on tax cuts had a multiplier of 0.82.<sup>29,30</sup>

There are several channels via which infrastructure investment may impact GDP. These are on both demand and supply sides, and include:

- **Employment effects:** where infrastructure investment increases the labour supply by improving access to work or increases productivity by moving people into more productive jobs.
- **Induced investment or consumption:** where the new infrastructure makes the community more attractive, increasing actual or expected demand which leads to higher investment in the area and higher levels of spending.
- **Supply chain effects:** where purchases made as a result of the intervention follow through to firms linked into the supply chain.
- **Agglomeration economies:** where productivity, either within or across industries, is increased by the density of economic activity. This is often derived from the greater degree of specialisation, and therefore labour productivity, that this facilitates.

The productivity impacts associated with agglomeration economies are widely accepted, yet until relatively recently they were not accounted for in government spending decisions. In 2007 the Centre for Cities

estimated that 25% of the economic benefits of transport investments in Leeds were not being accounted for by the Department for Transport (DfT).<sup>31</sup> Since then, DfT have published their renowned Web-based Transport Analysis Guidance (WebTAG), which includes advice on how to account for productivity impacts of investments, including agglomeration economies. It is now time that the productivity impacts of social infrastructure were accounted for in a similarly systematic way so that the economic benefit of investing in more deprived communities is recognised.

## The case for social infrastructure

Anne Power's research into the growth of former industrial cities across Europe, finds that social investment and training programmes were a key part of cities' trajectories towards population and job regrowth, and that local councils and mayors have an important role to play in perpetuating sustainable prosperity.<sup>32</sup> The Sheffield based SIPHER Consortium have also set out to research the connection between inclusive growth, mental health, early years and housing with health and wellbeing, acknowledging the important relationship between social infrastructure, health and economic outcomes.<sup>33</sup>

There is a growing body of evidence that social infrastructure is important for growth and this paper asks how the productivity benefits compare to those of traditional economic infrastructure. This requires a working definition of 'social infrastructure'; a concept which has been broadly interpreted. To make a clear argument for social infrastructure to be considered equivalent to physical infrastructure, this paper focuses on social infrastructure that increases the productive capacity of society. Examples include nurseries, housing, community healthcare centres, and access to adult learning. This is in line with the RSA Commission on Inclusive Growth's model of whole-system change but is not an all-inclusive definition. Box 1 below discusses the broader social returns and Box 2 provides more detail on the definition of social infrastructure and related terms.

In aggregate, investment in social infrastructure – like physical infrastructure – could be expected to generate positive and lasting wider impacts on the economy. On the demand side, investment in social infrastructure can make a community a more attractive place to live; increasing house prices, private investment and business activity as in the induced investment and employment effects above. In *Valuing Social Infrastructure* Caroline Slocock's description of the reverse process: a 'cycle of community deprivation' where lack of social infrastructure causes businesses to shut down, underlines the risk of failing to invest, and suggests

29 Deleidi, M., et al. (2019) *The macroeconomic impact of government innovation policies: A quantitative assessment*. UCL Institute for Innovation and Public Purpose. Available at: <https://www.ucl.ac.uk/bartlett/public-purpose/wp2019-06>

30 Note that these multipliers are higher than many other estimates. See Box 3 for more detail.

31 Centre for Cities (2007) *op cit*

32 Power, A. (2018) *Regional politics of an urban age: can Europe's former industrial cities create a new industrial economy to combat climate change and social unravelling?* Available at: [http://eprints.lse.ac.uk/89858/1/Power\\_Regional-politics-of-an-urban-age\\_Published.pdf](http://eprints.lse.ac.uk/89858/1/Power_Regional-politics-of-an-urban-age_Published.pdf)

33 For more detail on SIPHER's work see: <https://sipher.ac.uk/>

that the productivity impacts of both investment and divestment may be reinforcing.<sup>34</sup>

On the supply side, the social infrastructure investment can have labour force effects. By improving the skills, employability, mobility, health and wellbeing of the labour force, access to social infrastructure should increase productivity in the economy and therefore overall output and GDP. Increasing national productivity does not tend to be the primary objective of social infrastructure investment, which is concerned with social outcomes such as improving public health, but proponents should be making a stronger economic case in order to encourage investment.

Some social infrastructure investment, including early years and public health initiatives, could also be conceived as preventative action, which has been the subject of much research by organisations such as the Early Intervention Foundation and Public Health England. Preventative action is often discussed in terms of its fiscal benefits, as the cost of prevention is typically much smaller than the cost of treatment. It can also be connected with greater labour supply effects because the initial unproductive period is avoided. For example, early years social services interventions could increase education levels and prevent crime, raising productivity over a child's lifetime. However, social infrastructure investment does not have to be preventative to have a productive return; for instance, the near-term productivity benefit from childcare derives from the parent's return to work. Evidence for the economic benefits of various types of social infrastructure investment are discussed below.

This paper focuses on social infrastructure that increases the productive capacity of society. Examples include nurseries, housing, community healthcare centres, and access to adult learning.

### Box 1: Beyond GDP – the social returns

This paper is predominantly concerned with the long-term productivity impacts of investing in social infrastructure. This is intended to enable social infrastructure, such as mental health care centres, to be assessed like for like with transport or infrastructure investments. It should not be taken to mean that productivity and national output, or GDP, are all that matter. On the contrary, CPP's own Inclusive Growth Index measures shared prosperity in much broader terms, considering health, inequality, unemployment and leisure time alongside consumption.

If we look beyond GDP and measure outcomes based on CPP's inclusive growth framework or on wellbeing we would see even greater benefits of investment in social infrastructure than we have set out here. The investments described in this paper will likely have social benefits such as increased population health or wellbeing, that outweigh their productivity benefits. For instance, most people would consider children's development and wellbeing to be the primary objective for nurseries, rather than their future economic contribution to society. Societal wellbeing is increasingly being discussed as a national measure of success and the New Zealand government has introduced wellbeing measures into its budget.<sup>35</sup> In the UK, organisations such as Trust in Fields are working to highlight the importance of these measures. Their 2018 report *Revaluing Parks and Green Spaces* uses wellbeing measures to quantify the value of green spaces to peoples' lives. They found that the wellbeing value of our parks is around £34bn a year and that parks are a key part of the preventative health process, saving £111m a year in GP visits.<sup>36</sup> The ESCR commissioned What Works Centre for Wellbeing is also doing vital work to gather evidence and guidance on how to integrate wellbeing into policy. This research does not intend to downplay the salience of this agenda, only to make the point that from an economic perspective, social infrastructure investment has potential productivity returns that are comparable to those from physical infrastructure, such as transport.

34 Slocock, C. (2018) *Valuing Social Infrastructure*. Available at: <http://www.civilexchange.org.uk/wp-content/uploads/2018/06/Valuing-Social-Infrastructure-final.pdf>

35 Their 2019 Budget is available at: <https://treasury.govt.nz/sites/default/files/2019-05/b19-wellbeing-budget.pdf>

36 This is based on the amount that individuals would need to be compensated for the associated loss in 'life satisfaction'. See Fields in Trust (2018)

## Box 2: Defining social infrastructure and related terms

The term social infrastructure has been increasingly used to convey the status of investment in capital, services, programmes, institutions and leadership of activity which is usually considered within the domain of social policy and without direct economic impact. Yet social and economic policy do not exist in isolation and there are feedback effects between the two; as this paper discusses, investment in social infrastructure is key to economic growth.

**Infrastructure** are systems. The Cambridge dictionary defines infrastructure as “the basic systems and services that a country or organization uses in order to work effectively”.

**Social infrastructure**, by extension, are the systems which enable society to work effectively. The GLA define it as the “range of services and facilities that meet local and strategic needs and contribute to a good quality of life”.<sup>37</sup> These can include physical capital, human capital, social capital and public services. For example, childcare infrastructure may include physical buildings, an advice service, a nursery service, investment in hiring and training the relevant professionals and a network of parents and carers. To capture the richness of different societies, social infrastructure must be broad in its definition. In *Valuing Social Infrastructure*, Caroline Slocock describes social infrastructure as “the fabric of the community” including: the built environment, services and organisations, and the relationships that make up the community itself. This can include health centres, green spaces, recreational facilities and community groups. However, to understand the economic

returns to investing in social infrastructure, it must also be possible to measure its value. This paper therefore focuses on skills, health, housing, childcare and social care infrastructure, for which there is more available evidence.

**Capital** is commonly understood as an organisation’s net assets. This can include fixed capital such as machinery and working capital such as finance.<sup>38</sup>

**Human capital** is defined by the OECD as “the stock of knowledge, skills and other personal characteristics embodied in people that helps them to be productive”.<sup>39</sup> Education and training are considered to represent investment in human capital but education spend in the UK does not count as capital expenditure.

**Social capital** is sometimes equated with social infrastructure but is a distinct concept which refers to the networks of relationships between people. Economist Diane Coyle outlines that: “social capital relates to generalised trust, shared rules, and the social norms and values that shape the ways we behave”.<sup>40</sup> Investment in social capital is also not considered to be capital expenditure by government.

**Capital expenditure** is defined by Parliament as “net spending on the acquisition of assets”, with an asset being something that can be owned which has a future economic value.<sup>41</sup> This includes physical infrastructure but excludes most non-physical infrastructure. In practice this means that a lot of social infrastructure investment is excluded from capital budgets, despite having long-term returns, as it involves investment in human capital, social capital and public services.

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*Revaluing Parks and Green Spaces*. Available at: <http://www.fieldsintrust.org/Upload/file/research/Revaluing-Parks-and-Green-Spaces-Report.pdf>

37 GLA (2018) *Draft New London Plan: Chapter 5*. Available at: <https://www.london.gov.uk/what-we-do/planning/london-plan/new-london-plan/>

38 UK Parliament (2017) *Finance Glossary*. Available at: <https://www.parliament.uk/documents/commons/Scrutiny/finance-glossary-0717.pdf>

39 OECD (2019) *Productivity, human capital and educational policies*. Available at: <https://www.oecd.org/economy/human-capital/>

40 Wealth Economy (2019) *Measuring wealth, delivering prosperity. Wealth Economy Project: Natural and Social Capital. Interim Report to LetterOne*. Bennett Institute for Public Policy, University of Cambridge. Available at: <https://www.bennettinstitute.cam.ac.uk/publications/measuring-wealth-delivering-prosperity/>

41 Ibid.



## Chapter 2: Evidence for the economic benefit of social infrastructure

Certain types of social infrastructure are closely linked to improved economic outcomes. These include education and skills infrastructure, physical and mental health infrastructure, child and social care infrastructure and housing; the research on these is reviewed below. There is considerable evidence that these interventions impact the economy but the way that the effects are presented varies considerably between disciplines and papers and in many cases the productivity benefits need to be inferred from the economic costs of inaction.

### Education and skills infrastructure

The link between skills and productivity is well accepted, with skills and human capital forming a key pillar of the former Chancellor's 2015 'productivity plan'.<sup>42</sup> Improving education and skills infrastructure has the direct impact of improving technical efficiency by enabling people to accomplish more difficult and specialised tasks, and the indirect impact of facilitating technical diffusion and innovation as skilled people are required to generate and execute new ideas and utilise technology.<sup>43</sup> However, skills infrastructure is not evenly distributed across England; in some areas all residents live within a 15-minute walk of a further education college, whilst in others just 5% live within a 30-minute walk.<sup>44</sup>

As skills are typically very difficult to measure, education, as a route to acquiring skills and knowledge, becomes a useful proxy. Education certificates or time spent in education are therefore commonly used as a signal of the individuals' skills. Here too there are marked differences across the country; in some local authorities, the share of the local population without any formal qualifications is as high as one in five (20%) and in others as low as one in 50 (2%).<sup>45</sup> As outlined below, addressing these geographical inequalities in skills infrastructure should therefore improve productivity.

In a 2015 research paper for the then Department for Business, Innovation and Skills (BIS), the National Institute of Economic and Social Research (NIESR) measured the direct productivity impact of skills

investment. They used the Total Economy Database, the EU Labour Force Survey and the Structure of Earnings Survey to estimate the contribution of skills improvements to GDP growth in the periods 2002-2007 and 2008-2013, with the education level of workers being the key 'productivity enhancing characteristic'.<sup>46</sup> They found that upskilling accounted for around 20% of total labour productivity growth between 2002 and 2007. This is broadly in line with previous research findings in which comparable estimates range from 10-25%; for instance, the finding that that a 1 per cent rise in the share of the workforce with a university education raises the level of productivity by 0.2-0.5 per cent in the long run.<sup>47</sup> In the later period, they conclude that productivity growth would have been significantly lower following the financial crisis had it not been for skills improvements.<sup>48</sup> The importance of skills infrastructure that covers a full range of qualifications is underlined by the OECD, who have found that investing in the skills of the least qualified will provide the highest return for inclusive growth.<sup>49</sup> In the coming months CPP hope to contribute to the evidence base on the scope of skills investment to reduce regional inequality.

An alternative approach to quantifying the productivity impact of upskilling is to monetise the lifetime returns to individuals who obtain certain qualifications. Microeconomic theory suggests that workers will be paid the marginal value of their labour and as a worker's wage is more easily measured and more commonly recorded than their output, it is often used to proxy for productivity in research. Total labour costs, and hence productivity, is estimated by adding 30% of non-wage labour costs, such as workplace overheads and tax contributions, to observed wages. Productivity gains can then be discounted to provide a present value gain.<sup>50</sup>

Using this methodology, the Department for Education (DfE) ran linear regressions on Labour Force Survey data to estimate the productivity returns to level two and three qualifications including GCSEs, A levels and apprenticeships. They found that those who achieve five GCSEs at A to C including English and Maths as their highest qualification have £232,000-£283,000 worth of lifetime productivity gains compared to those with no qualifications. Men with a level three apprenticeship generate an additional lifetime productivity of £176,000 compared to those with lower qualifications. More generally, they found that educational attainment

42 For more detail see: <https://www.gov.uk/government/news/productivity-plan-launched>

43 Gambin, L., (2009) *Exploring the links between skills and productivity: final report*. Available at: [https://warwick.ac.uk/fac/soc/ier/publications/2009/gambin\\_et\\_al\\_2009\\_skills.pdf](https://warwick.ac.uk/fac/soc/ier/publications/2009/gambin_et_al_2009_skills.pdf)

44 Source: Journey time statistics: data tables (JTS0404). Available at: <https://www.gov.uk/government/statistical-data-sets/journey-time-statistics-data-tables-jts#user-access-to-key-services-by-journey-time-jts02>

45 Source: Annual Population Survey. % with no qualifications (NVQ) - aged 16-64. Accessible via Nomis.

46 They also account for in-work training but find that the stock of training capital had declined or stagnated since 2009

47 Holland D. et al. (2013) *BIS Research Paper No. 110: The relationship between graduates and economic growth across countries*. Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/229492/bis-13-858-relationship-between-graduates-and-economic-growth-across-countries.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/229492/bis-13-858-relationship-between-graduates-and-economic-growth-across-countries.pdf)

48 Aznar, A. et al. (2015) *UK skills and productivity in an international context*. Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/486500/BIS-15-704-UK-skills-and-productivity-in-an-international-context.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/486500/BIS-15-704-UK-skills-and-productivity-in-an-international-context.pdf)

49 OECD (2012) *Promoting Growth in All Regions: Lessons from across the OECD*. Available at: <http://www.oecd.org/site/govrdpc/50138839.pdf>

50 DfE (2014) *The economic value of key intermediate qualifications*. Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/387160/RR398A\\_-\\_Economic\\_Value\\_of\\_Key\\_Qualifications.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/387160/RR398A_-_Economic_Value_of_Key_Qualifications.pdf)

encourages labour market participation, particularly for women. All qualifications were associated with significantly higher lifetime productivity and incremental improvements across a broad range of subjects had lifetime returns, leading the authors to conclude that there is a 'strong economic imperative that all children fulfil their education potential'.<sup>51</sup>

Previous research commissioned by DfE and BIS supports these results. An earlier paper by economist Steve McIntosh looked at the lifetime productivity benefits of completing government funded apprenticeships, net of their cost, finding that a level three apprenticeship was associated with a lifetime net productivity gain of £105,000 compared to those who completed a level two. A key question for the credibility of such findings is whether the skills are gained during education, or whether they are due to innate ability or family background. The Institute for Fiscal Studies (IFS) attempted to answer this question using panel data from the National Child Development Study to control for such effects. They found that OLS previous estimates on the returns to education are 'reasonable estimates of true causal impact'.<sup>52</sup>

Skills infrastructure needs to be considered in the context of wider industrial and regional strategies and to encourage and complement in-work training, with a focus on management practices and technology adoption

However, the skills acquired through study are not productive in isolation. The studies above assume that the returns to skills in the economy remains the same over people's lifetime. In reality, skills need to be considered in the broader context of the economy, and productive returns are dependent on R&D investment, the use of technology, structural changes and management practices.<sup>53</sup> In 2017, the Chief Economist of the Bank of England, Andy Haldane, suggested that poor management could be damaging productivity and former Deputy Head of the Government Economic Service, Terra Allas has more recently linked better management

to higher employee satisfaction and productivity.<sup>54</sup> Skills infrastructure therefore needs both to be considered in the context of wider industrial and regional strategies and to encourage and complement in-work training, with a focus on management practices and technology adoption.

### Physical and mental health infrastructure

Health is less commonly acknowledged as a driver of productivity but CPP research has shown both that there is a "virtuous circle between health and prosperity" and that health inequalities in the UK are large; with 16 years' difference in healthy life expectancy between residents of Blaenau Gwent and Wokingham.<sup>55,56</sup> As CPP have previously argued, the solution to addressing health inequalities needs to address the root causes of poor health and requires all parts of the system to work together. This is a challenge but as outlined below, the productivity benefits of investing in balanced mental and physical health care infrastructure could be extensive.

# 39%

People in the North are 39% more likely to lose a job after a spell of ill health than those in the rest of England.

Improving community healthcare systems could benefit the economy both by increasing participation in the labour force and by making people more productive at work – increasing their technical efficiency. A recent paper by the Northern Health Science Alliance (NHSA) found that 30% of the productivity gap between North and South is due to ill health causing economic inactivity and that reducing those with limiting long-term health conditions by 10% would decrease economic inactivity by 3 percentage points and could increase GVA by £13.2bn.<sup>57</sup> The study uses regional comparisons to demonstrate that such a change should be possible; people in the North are 39% more likely to lose a job after a spell of ill health than those in the rest of England.

Other studies demonstrate the potential value of improving treatment plans and preventative care. Nick Hex and colleagues at the University of York estimate that in 2010/11 diabetes cost the economy £8.7bn in lost wages due to mortality, sickness and presenteeism.<sup>58</sup> As above, the productivity cost can be estimated by adding non-wage costs of around 30%, making the annual

51 DfE (2014) op cit.

52 The IFS find that measurement error bias and composition bias offset unobserved variable bias, suggesting that the results above are reliable estimates of the productivity impacts of academic and vocational study. See: IFS (1999) *Qualifications and earnings in Britain: how reliable are conventional OLS estimates of the returns to education?* Available at: <https://www.ifs.org.uk/publications/2719>

53 Gambin, L. (2009) op cit.

54 Her essay is available in the 2020 RSA/ Carnegie UK Trust publication: *Can Good Work Solve the Productivity Puzzle?* Available at: <https://www.carnegieuktrust.org.uk/publications/can-good-work-solve-the-productivity-puzzle/>

55 Dudding, J. et al. (2019) op cit.

56 Norman, A. et al. (2019) *The good life: communities, Measuring inclusive growth across communities*. Available at: <https://www.progressive-policy.net/publications/the-good-life-communities>

57 Bamba, C. et al. (2018) *Health for Wealth: Building a Healthier Northern Powerhouse for UK Productivity*, Northern Health Sciences Alliance, Newcastle. Available at: <https://www.thenhsa.co.uk/app/uploads/2018/11/NHSA-REPORT-FINAL.pdf>

58 Hex, N. et al., (2012) *Estimating the current and future costs of Type 1 and Type 2 diabetes in the UK, including direct health costs and indirect societal and productivity costs*. Available at: <https://jdrf.org.uk/wp-content/uploads/2015/10/Hex-and-Bartlett.pdf>

productivity loss £11.3bn.<sup>59</sup> This can be re-framed as the potential productivity benefit of improvements in the prevention of diabetes and treatments that lead to better glycaemic control.

Hex's estimates included the productivity loss associated with presenteeism, which is working whilst ill at a reduced productive capacity. This is often associated with physical illness, but poor mental health can also detract from motivation and depress productivity. Research from the Mental Health Foundation suggests that around 64% of those with a common mental health problem are in work and if they do not have access to appropriate support, this may be affecting productivity. In addition, 12.7% of sickness absence is attributed to mental health conditions and a 2008 paper from The King's Fund calculates the cost in lost earnings associated with various mental health disorders to have been £26.1bn in 2007.<sup>60</sup> Again, with a non-wage costs uplift, these could be viewed as productivity losses, or potential productivity gains from better access to treatment, particularly for more common conditions such as anxiety, eating disorders and depression.<sup>61</sup> The paper suggests that improving access to treatment would have net savings at a societal level but that there is little motivation to do so as these savings do not accrue to the NHS, who pays for treatment.

An LSE paper on perinatal related mental health also estimates there to be sizable economic benefits from improved access to treatment.<sup>62</sup> Around 20% of women are affected by anxiety, depression or psychosis during pregnancy or in the first year following birth, and this can adversely affect child development with long-term consequences for the economy. Bauer estimates that there is a £6.4bn long-term cost to society for each year's cohort including increased use of services, loss of quality adjusted life years and productivity losses from time spent away from work. It is unclear from the paper exactly how much of this can be attributed to productivity losses, but it is likely to range from 10-20% of the total social cost.<sup>63</sup> Bauer goes on to state that half of all cases go undetected and more do not get evidence based treatment, as specialist community provision is very limited and falls short of national standards across most of the UK.<sup>64</sup> There are therefore high potential

gains from increasing specialist community provision in this area.

Taken together, the above research demonstrates that there are significant economic gains to be had from improving treatment plans and access to specialist services, particularly mental health services. One UK meta analysis found that the median return on public health interventions was 14.3 to 1, demonstrating that preventative health investments are also cost saving.<sup>65</sup>

The recently published *Marmot review, 10 years on* highlights the relationship between poor health and economic deprivation, underscoring the importance of early intervention for preventing health inequalities.<sup>66</sup> Marmot focusses on the role of healthy communities, good work, and early years interventions, where there is scope to change the course of a child's life.

### Childcare and social care infrastructure

As discussed by both Bauer and Marmot, there are long-term gains from investment that supports child development. Another importance facet of social infrastructure is therefore the systems we have in place to support families and vulnerable people in our communities. This includes childcare – in particular teaching, support and care for early pre-school years, and social care – for families and individuals who may require additional support due to illness, disability or mental health problems.

Early childhood development is considered particularly important as this is when the brain develops most rapidly and the foundations for wellbeing in later life are laid.<sup>67</sup> Investing in this form of social infrastructure therefore has significant benefits, including productivity impacts. In the short term, these derive from the parents rather than the child, facilitating increased parental participation in the workforce. In Canada, the Quebec universal low-fee childcare programme is estimated to have increased female participation by 3.8% in 2008, increasing Quebec's GDP by 1.7% or \$5.1bn as a result.<sup>68</sup> The current high cost of childcare in the UK suggests that there is scope for productivity increases from parents returning to work here too.<sup>69</sup> In the longer term,

59 In 2010/11 prices.

60 The King's Fund (2007). *Paying the Price: The cost of mental health care in England to 2026*. Available at: <https://www.kingsfund.org.uk/publications/paying-price>

61 Adding 30% non-wage costs gives an estimated potential productivity gain of £33.9 billion per year if all cases could be treated.

62 Bauer, A. et al. (2014) The costs of perinatal mental health problems. Available at: <http://everyonesbusiness.org.uk/wp-content/uploads/2014/12/Embargoed-20th-Oct-Final-Economic-Report-costs-of-perinatal-mental-health-problems.pdf>

63 Based on the proportion of social cost per case attributable to lost earnings. It is not straightforward to reconstruct the cost per woman giving birth and hence total cost as the appropriate prevalence data is not provided.

64 Ibid.

65 Masters, R. et al. (2017) *Return on investment of public health interventions: a systematic review*, J Epidemiol Community Health 2017;71:827-834. Available at: <https://jech.bmj.com/content/71/8/827.info>

66 Marmot, M. et al. (2020) *Health equity in England: the Marmot review 10 years on*. Available at: <https://www.health.org.uk/publications/reports/the-marmot-review-10-years-on>

67 World Health Organisation (2013) *Nurturing human capital along the life course: investing in early child development*. Meeting report, WHO Geneva, 10-11 January 2013. Available at: [https://www.who.int/maternal\\_child\\_adolescent/documents/investing\\_ecd/en/](https://www.who.int/maternal_child_adolescent/documents/investing_ecd/en/)

68 Figure in 2008 prices. Fortin, P. et al. (2012) *Impact of Quebec's Universal low-Fee Childcare Program on Female Labour Participation, Domestic Income and Government Budgets*, Université de Sherbrooke. Available at: <https://www.childcarecanada.org/documents/research-policy-practice/12/04/limpact-des-services-de-garde-%C3%A0-contribution-r%C3%A9duite-sur-le>

69 The OECD Family Database suggests UK childcare costs are among highest in the world for two earner couples. Available at: <http://www.oecd.org/social/database.htm>

early years support and education has the potential to improve children's outcomes, making them more likely to be productive citizens in later life. However, there is often a trade-off between these two objectives; the IFS find that internationally, programmes rarely support both.<sup>70,71</sup> For the longer-term child development benefits to be realised the care provided must be of high quality and mixed results on the impact of free nursery provision in the UK are arguably due to an inconsistent standard of care.<sup>72</sup>

Early childhood development is considered particularly important. Investing in this form of social infrastructure therefore has significant potential benefits, including productivity impacts.

The Sure Start programme, introduced in 1999, attempted to address the issues of female participation, child development and deprivation in the UK by integrating early education, childcare healthcare and family support services. It was targeted at disadvantaged communities and at the programme's peak in 2010 there were 3,632 centres open across England before it started being cut back; many centres have now closed.<sup>73</sup> Child poverty was found to have fallen by more than the national average in Sure Start 'reach' areas and mothers in reported higher levels of life satisfaction, however, a 2011 economic evaluation of the programme by DfE found the benefits to be smaller than expected.<sup>74</sup> More parents were in work in Sure Start areas but the £8,000 economic benefit per family in work was relatively small when averaged out per child in the scheme; £279 - £557, compared to the cost of provision.<sup>75</sup> However, the evaluation also stated that the main economic benefits were not expected to emerge until 15 years after the intervention and so it was not able to evaluate these. Interestingly, a more recent report by the IFS has found that the programme significantly reduced hospitalisation among children by the time they were of primary school age – by 30% by age 10-11.<sup>76</sup> The IFS report does not express these as productivity benefits but we know from the studies listed above that improved health has scope to improve productivity in later life. These recent

findings from the IFS suggest that the economic benefits of the Sure Start programme may be much higher than first thought and underline the difficulty of maintaining political buy in for a system with such long-term returns.

Social care systems also have a role to play in promoting child development and supporting families into work. The government's 'Troubled Families' programme aims to join up services for families with multiple high cost problems, assigning a lead worker to engage with them over the longer term. The programme aims to address issues including worklessness, health and crime and should therefore have a positive impact on productivity for the families involved. The most recent evaluation finds that every £1 spent delivers £2.28 of economic benefits.<sup>77</sup> These benefits are broader than productivity gains, but we can expect the productivity share of these to be sizable as the majority come from changes to the proportion of looked after children or those committing youth crime. We know that the productivity cost of crime can be high; a Home Office paper finds that the average cost in lost productivity for crime victims is between £50 and £254,710 dependant on the kind of crime.<sup>78</sup>

It is more difficult to evaluate the productivity impact of social and childcare investments as they are often realised over long time scales. They are also realised through multiple channels, including those discussed above: health and skills, alongside others such as crime. This means that they have great potential to support the economy, but also that there is less clear evidence to support their productivity impact.

### Housing infrastructure

Housing infrastructure can increase productivity by providing access to both good quality housing and job markets. Poor housing quality is understood to be an important determinant of health, which also makes it a determinant of labour productivity. Yet in 2017 the English Housing Survey found that 19% of homes did not meet the Decent Homes Standard.<sup>79,80</sup> Systems that support people in to better quality housing in either the public or private sector therefore have scope to support the economy by improving population health.

70 For example see Steven Barnett's 1995 evidence review in *The Future of Children*, available at: [https://www.researchgate.net/publication/240099282\\_Long-Term\\_Effects\\_of\\_Early\\_Childhood\\_Program\\_on\\_Cognitive\\_and\\_School\\_Outcomes](https://www.researchgate.net/publication/240099282_Long-Term_Effects_of_Early_Childhood_Program_on_Cognitive_and_School_Outcomes)

71 IFS (2019) Briefing note: *Early education and childcare spending*. Available at: <https://www.ifs.org.uk/publications/14557>

72 Blanden, J. et al (2016) *Evaluating the Impact of Nursery Attendance on Children's Outcomes Final Report*. Available at: <https://www.nuffieldfoundation.org/wp-content/uploads/2019/11/evaluating-the-impact-of-nursery-attendance-on-childrens-outcomes-final-report.pdf>

73 House of Commons (2017) *Briefing paper: Sure Start (England)*, Number 7257.

74 DfE, (2014) *Evaluation of Children's Centres in England (ECCE) The extent to which centres 'reach' eligible families, their neighbourhood characteristics and levels of use*. Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/318227/RR358\\_-\\_FINALrevisedReachReport07042014.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/318227/RR358_-_FINALrevisedReachReport07042014.pdf)

75 Meadows, P. (2011) *National evaluation of Sure Start local programmes: An economic perspective*. Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/182194/DFE-RR073.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/182194/DFE-RR073.pdf)

76 Cattan, S. et al (2019) *The health effects of Sure Start*. Available at: <https://www.ifs.org.uk/publications/14139>

77 MHCLG (2019) *National evaluation of the Troubled Families Programme 2015 to 2020: findings* Available at: <https://www.gov.uk/government/publications/national-evaluation-of-the-troubled-families-programme-2015-to-2020-findings>

78 Home Office (2018) *The economic and social costs of crime second edition*. Available at: <https://www.gov.uk/government/publications/the-economic-and-social-costs-of-crime>

79 MHCLG (2017) *EHS Stock profile and condition 2017* Available at: <https://www.gov.uk/government/statistics/english-housing-survey-2017-stock-condition>

80 CPP (2018) *Beyond Sticking Plasters*. Available at: <https://www.progressive-policy.net/publications/beyond-sticking-plasters>



# 1 out of 5

Investment in affordable housing also helps to avoid skills shortages, particularly in urban areas. One in five businesses regard house prices as a constraint to business expansion in their area and one in three of London's police force and ambulance services live in social housing, suggesting that affordable housing infrastructure should be a priority for government. Residents in social housing contributed £15.3bn to the economy in 2015.<sup>81,82</sup> More broadly, affordable housing close to job creation can increase labour mobility and improve skills matching, particularly as the current system for allocating social housing discourages mobility as those pursuing a job related move are less likely to be the highest priority for a move.<sup>83,84</sup> However, due to the number and complexity of factors affecting labour mobility, the benefit of improved mobility tends not to be monetised; government impact assessments of affordable housing instead focus on the economic value arising from land value uplifts associated with the conversion of land to residential use.

Housing infrastructure is also important in relation to homelessness, which is rising in the UK according to research by Shelter, who found that 320,000 people were recorded as homeless in 2018.<sup>85</sup> Homelessness is associated with high barriers to work and unemployment, with the 2016 Irish Census finding that 70% of working age adults experiencing homelessness were unemployed. Reducing and preventing homelessness therefore has capacity to add to productivity.

The Conservative manifesto committed to expand homelessness initiatives such as Housing First, which is an approach that combines stable housing with intensive and person-centred support, including employment and training advice. International evidence suggests that employment interventions have had mixed success due to the variability of local labour markets and employer attitudes, making it difficult to quantify their impact.<sup>86</sup> In his 2018 report, Professor Nicolas Pleace underlines that the evidence base is “stronger in relation to systems than... single services”. This demonstrates the importance of understanding social infrastructure as systems and ensuring that investment is both strategic and coordinated.

**Investment in affordable housing also helps to avoid skills shortages, particularly in urban areas; one in five businesses regard house prices as a constraint to business expansion.**

## **A comparator: transport infrastructure**

The above research considers the productivity benefits of sustained and systematic social infrastructure interventions, for example, reducing the incidence of long-term health conditions in the North of England. This section compares the scale of these potential productivity impacts to those of a traditional economic infrastructure investment such as transport.

As discussed above, Centre for Cities used case studies in the Leeds City Region to estimate agglomeration benefits of improved transport links within the region and to Manchester. They found that productivity benefits derived from agglomeration increased the expected benefits significantly; between 12% and 25% depending on the package. In total, they estimated that annual agglomeration productivity benefits would be between £10m and £25m across the wider study area 10 years after the initial investment, bringing the total annual benefits to £68m-£226m including user benefits.<sup>87</sup> The most significant commitment to transport investment in recent times has been HS2, which has recently been reaffirmed by the Prime Minister. The Strategic Outline Business Case for phase two estimates that full network, if built, could generate up to £79bn in GDP by 2093.<sup>88</sup> This includes £61bn in benefits to business users of the network and £17m in productivity benefits from agglomeration, increased output and increased labour force participation. KPMG estimated the total annual productivity gains could be up to £15bn per year from 2037, although this figure has been criticised for double counting and including ‘people effects’ where connected places attract more highly skilled people.<sup>89</sup>

As the government have not recently undertaken social infrastructure projects of a similar scale to HS2, it is difficult to source a comparable ‘whole life’ benefit that

81 MHCLG (2011), *Impact Assessment for Affordable Rent*. Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/6021/1918816.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/6021/1918816.pdf)

82 Centre for Economics and Business Research (2016) *The business case for affordable housing*. Available at: <https://www.peabody.org.uk/media/10773/business-case-for-affordable-housing.pdf>

83 Aubrey, T. (2019) *How housing policy can support the Scottish Government's Inclusive Growth Strategy*. Available at: <https://www.progressive-policy.net/publications/how-housing-policy-can-support-the-scottish-governments-inclusive-growth-strategy>

84 Regeneris Consulting & Oxford Economics (2010), *The Role of Housing in the Economy*

85 Shelter (2018) *320,000 people in Britain are now homeless, as numbers keep rising*. Available at: [https://england.shelter.org.uk/media/press-releases/articles/320,000\\_people\\_in\\_britain\\_are\\_now\\_homeless\\_as\\_numbers\\_keep\\_rising](https://england.shelter.org.uk/media/press-releases/articles/320,000_people_in_britain_are_now_homeless_as_numbers_keep_rising)

86 Pleace, N. (2018), *Preventing Homelessness: A Review of the International Evidence*. Available at: <https://www.simon.ie/Publications/Research/TabId/278/ArtMid/1573/ArticleID/223/Preventing-Homelessness-A-Review-of-the-International-Evidence.aspx>

87 Table 3 in Centre for Cities, (2007) *The case for better transport investment: Agglomeration and growth in the Leeds City Region*. The 25% increase refers to Package 2 where agglomeration benefits are £10m and user benefits are £61m. Available at: <https://www.centreforcities.org/wp-content/uploads/2014/09/07-11-27-The-case-for-better-transport-investment.pdf>

88 DFT (2017) *High Speed Two Phase Two Economic Case Moving Britain Ahead*. Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/634196/high-speed-two-phase-two-economic-case.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/634196/high-speed-two-phase-two-economic-case.pdf)

89 Economic Affairs Committee, (2015), *The Economics of High Speed 2 - Chapter 6: Will HS2 stimulate economic growth?* Available at: <https://publications.parliament.uk/pa/ld201415/ldselect/ldeconaf/134/13410.htm>



has been calculated in line with Green Book standards. However, the annual benefits appear comparable to those from social infrastructure investment. For instance, the NHTA paper discussed above estimates that the productivity gains from reducing ill health in the North are £13.2bn per year, whilst the King's Fund estimate that mental health disorders cost £26bn per year in lost earnings, which could be reduced by expanding treatment.<sup>90</sup>

Notable in an Economic Affairs Committee report on HS2 is the ambiguity of its economic benefits: the committee find that “investing in transport infrastructure does not necessarily lead to economic growth”. Yet on 11th February this year the Prime Minister equated productivity with our “mass transit system”, promising “a massive programme of investment in local transport”.<sup>91</sup> This suggests that uncertainty over long run impacts should not hold back investment in social infrastructure; it is certainly not holding back investment in transport.

### Evidence summary

It is difficult to weigh the above economic effects against each other; some refer to specific interventions whilst others are the benefits of achieving outcomes associated with social infrastructure investment, some are measured outcomes whilst others are estimates. The table below collates a some of the figures discussed above for illustrative purposes. For ease of reference the prices are in the year of publication rather than in 2020 prices and the table should not be used to draw direct comparisons

### Issues drawing inference from the data

Whilst there is a large body of evidence on the economic impacts of investing in social infrastructure there are some difficulties in drawing inference from the information provided. One is the difficulty of comparing like for like; some estimates are expressed in GVA, some in additional income to labour, and others as benefit cost ratios. Some are discounted lifetime impacts, whilst others are annual. Interestingly, whilst in transport we see productivity impacts expressed as gains for economic growth, in the literature around social infrastructure, they are more often expressed as a loss in consequence of inaction. This is particularly the case for social and childcare infrastructure and does not complicate the interpretation so much as set the framing as a negative rather than positive investment.

Many of the estimates also rely on labour costs to proxy for productivity and refer to potential rather than actual productivity gains.<sup>92</sup> Actual impacts can be difficult to measure, both because the benefits are long-term and therefore inherently uncertain, and also because changes to productivity are the result of many interdependent factors, making it difficult to attribute causation. Some essential outcomes, such as high-quality care, can also be difficult to capture.<sup>93</sup> Within the realm of public health, the SIPHER Consortium are attempting to build an evidence base which accounts for these complex causal relationships and provides a multi-sectoral appraisal. To do this, they are working with three places: Sheffield, Greater Manchester and Scotland, who have all used their devolved powers to break down departmental silos. Taking such a place-based approach may prove essential for optimising infrastructure investment – both economic and social.

**Figure 3: Evidence summary – the productivity returns on social infrastructure investment**

Infrastructure type	Potential annual productivity gain (£bn) <sup>94</sup>	Economic gain per £1 spent (£)	Per person lifetime productivity gain (£)
Education & skills	-	-	176,000-283,000
Physical & mental health	11.3-33.9	-	-
Child & social care	2.6	2.28	279-557
Transport	0.1-15		

90 Note that the NHTA figure is in 2017 prices, as is the HS2 estimate. The £26 billion estimate from the King's Fund paper is in 2007 prices and would be higher if inflated to 2017 and if adjusted to include 30% non-wage labour costs.

91 The speech is available at: <https://www.gov.uk/government/speeches/pm-statement-on-transport-infrastructure-11-february-2020>

92 There are several issues with the theory that labour is paid their marginal product, including a failure to account for economic rents, differences in bargaining power or efficiency wage theory, which suggests that workers who are paid above the equilibrium level put in more effort and are therefore more productive. However, the limited available data necessitates this approach and empirical data suggest that between the 1990's and 2009, the relationship between wages and productivity generally held true. See, for example, Fig. 1.1 in the 2011 Institute for Employment Studies paper commissioned by the European Employment Observatory. Available at: <https://www.employment-studies.co.uk/resource/wages-productivity-and-employment-review-theory-and-international-data>. More recent research by the OECD (available at: <http://www.oecd.org/economy/outlook/Decoupling-of-wages-from-productivity-november-2018-OECD-economic-outlook-chapter.pdf>) finds that there has been a decoupling of low and middle income wage growth from productivity growth, with wages falling behind. Changes to low and middle income wages are therefore likely to understate true productivity impacts.

93 For example, see the discussion on the inadequacy of Ofsted rankings in capturing quality of care in: Blanden, J. et al (2016) op cit

94 The £2.6bn referred to under child and social care is \$5.1bn at 2008 exchange rate of 1.96. See: [https://www.canada.ca/en/revenue-agency/](https://www.canada.ca/en/revenue-agency/services/forms-publications/previous-year-forms-publications/archived-rc4152/archived-average-exchange-rates-2008.html)

## Chapter 3: Why social infrastructure investment has been overlooked

The way that government spending is structured has implications for the types of projects that are funded and has led to social infrastructure investment being overlooked. This chapter outlines how spending decisions across government are made in order to assess how the system affects investment. It considers how spend is allocated within and between departments, and how this relates to overall public expenditure, before discussing how certain features of the system affect investment in social infrastructure.

### The spending system in brief

#### 1. Allocation within departments: The five case model and the Green Book

The Principal Accounting Officer for each department, usually the Permanent Secretary, the most senior civil servant, is responsible for ensuring that spending within their organisation provides good value for both their department and public sector as a whole.<sup>95</sup> New spend must be justified with a business case, which usually requires the approval of an internal board, who are answerable to the Accounting Officer. All major projects, new or contentious spend, and expenditure outside the limits of a department's delegated authority must also be approved by the Treasury. The Infrastructure and Projects Authority (IPA) in Cabinet Office lead on the approval of major projects, including infrastructure projects.

Departments use a five-case model for assessing spend at their internal boards and project or programme leads must outline the strategic, economic, commercial, financial and management case for investment to a satisfactory level in order to gain approval. These arguments are assessed according to the Green Book guide to appraisal and evaluation, which is based on microeconomic principles of maximisation and marginal utility and requires teams to assess the project's costs and benefits to society over its lifetime.<sup>96</sup> The Green Book's primary focus is on assessing value for money in terms of benefit to the economy but a department's primary focus is often the financial case – if the project is not within budget it cannot go ahead. Before policymakers can make the economic case for investing in social infrastructure, they need the budget allocated to do so.

#### 2. Allocation between departments: The Spending Review

Departmental budgets are allocated during the Spending Round, or Spending Review (SR) which typically occurs every two or three years. These are designed to cover longer periods of investment and provide a key opportunity for strategic planning.

As part of the SR process, the units within each department submit spending bids to their Accounting Officer, with evidence for the expected cost and benefit profile of spend in the coming years. Departments then bid to the Treasury for funding and the resulting settlements set the limit for spending on both capital and resource over the review period.<sup>97</sup> Whilst the Treasury attempts to assure the quality of departmental requests, they are to some extent reliant on departments self-regulating. The Institute for Government (IFG) have argued that there is a “lack of independent scrutiny of the plausibility of spending plans”.<sup>98</sup> Spending plans have been criticised for being unreliable and departments have an incentive to protect and expand their existing budgets, as cutting spend often means losing staff. As discussed below, this can lead to rent seeking behaviour and distortions in the system. IFG has also noted that the Treasury do not pay enough attention to past performance when allocating spend, and do not engage enough with more public service leaders with delivery experience. This limits the ability of the Spending Review process to allocate resource in a strategic and effective way. Both the relatively short-term time horizon and the competitive nature of the Spending Review are likely to disadvantage social infrastructure investment, which has long-term benefits that are often dispersed across policy areas. Lack of engagement with public service leaders may also play a role.

Both the relatively short-term time horizon and the competitive nature of the Spending Review are likely to disadvantage social infrastructure investment, which has long-term benefits that are often dispersed across policy areas

95 For more information see: <https://www.gov.uk/guidance/spend-controls-framework>

96 HM Treasury (2018) *The Green Book: appraisal and evaluation in central government*. Available at: <https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-government>

97 See Box 4 for more information on types of spend.

98 IFG (2019) *The 2019 Spending Review*. Available at: <https://www.instituteforgovernment.org.uk/publications/2019-spending-review>

### 3. Total managed expenditure: The Budget, fiscal rules and the OBR

Whilst Spending Reviews are the government's main opportunity for strategic planning, over half of public spending is determined outside this process. In 2019, 54% of total managed expenditure was allocated annually based on current liabilities such as public sector pension and social security payments.<sup>99</sup> Policy changes that affect this type of spend are discussed in the annual Budget. The Chancellor of the Exchequer traditionally presents his Budget to parliament covering revenue, spending and borrowing plans each year, although the most recent Budget was postponed due to Brexit.

The decisions that the Chancellor makes ahead of Budget are governed by fiscal policies set by government in order to maintain public confidence and financial stability. These policies are important as they change the overall envelope of public funding available to spend. Despite being created to maintain stability, these guidelines have tended to change with the Chancellor. Under Gordon Brown spending was constrained by the 'golden rule' that government should only borrow to invest, not to fund current spend. In 2010, Osborne introduced more context dependant fiscal rules as part of his austerity programme, including an obligation to balance the cyclically adjusted – or structural – budget. Currently, the Chancellor is committed to keeping the structural deficit to less than 2% of GDP, although this may change under the new Chancellor Rishi Sunak. These shifting goalposts demonstrate that however technical the exercise is deemed to be, defining the fiscal rules and setting the fiscal envelope for capital and spend is ultimately political.

The Office for Budgetary responsibility (OBR) was set up in 2010 as an independent body to oversee public finances and limit political gaming of the system. They work with Treasury officials to estimate how the proposed Budget will affect the UK economy and review fiscal risks and sustainability. In their Economic and Fiscal Outlook, the OBR consider the possible effects on the economy of the fiscal measures announced, including by applying a multiplier to the tightening or loosening of overall fiscal policy. At the most recent budget in 2018, the OBR applied a multiplier of 0.3-1.0% for every 1% of GDP loosening, falling to zero after five years.<sup>100</sup>

The factors that determine the size of the fiscal multiplier are discussed in more detail in Box 3. These effects are significant as they are factored into economic growth forecasts, which in turn are used by the Treasury, along with the fiscal rules, to determine the overall budget available to spend. Relatively low growth and a focus on

fiscal consolidation between 2010 and 2018 has limited investment in social infrastructure, which is often viewed as soft and without tangible economic benefit.

#### Box 3: Estimating GDP multipliers in the UK context

The fiscal multiplier is based on the idea that fiscal expansion or tightening has an impact on the economy beyond a transfer of wealth from government to consumers and businesses or vice versa. The size of the multiplier depends on the nation's marginal propensity to consume (MPC), with a higher MPC meaning that more of the fiscal stimulus will be spent, not saved. This spending creates further waves of stimulus, as the extra money filters through the economy.

Economic theory predicts that factors which increase a nation's MPC will increase the fiscal multiplier. Such factors include trade openness, the exchange rate regime, debt levels, labour market flexibility, monetary policy, and position in the business cycle. For example, higher trade openness means that some of the spending prompted by a stimulus package will go on imports, reducing the size of the multiplier. Lower interest rates mean consumers have more incentive to spend rather than save. Empirically calculating the level of the fiscal multiplier is difficult. Firstly, spending and taxes automatically respond to the business cycle through 'automatic stabilisers'—when output falls, spending increases automatically through mechanisms like unemployment benefits. This makes it hard to evaluate the isolated effect of a change in spending. To avoid this problem, research has focused on 'exogenous shocks' to spending. But identifying these shocks is in itself difficult, and there is no standard shock-identification methodology in the literature. Misidentification can cause flawed and unreliable results. Finally, the best-practice econometric method for estimating a multiplier (structural vector autoregression, or SVAR) requires detailed and high-frequency time-series data, which is not available for every country.<sup>101</sup> As a result, estimates of the multiplier vary vastly, with no robust consensus in the literature on their size. Estimates for the US range from 0.5 to 2.<sup>102</sup>

Despite this, estimates of the UK multiplier are relatively close; they tend to position it towards the lower end of the scale, below 0.5.<sup>103,104</sup> The Office for Budget Responsibility uses a working estimate of 0.3.<sup>105</sup> This means that for each £1 the government spends, GDP increases by 30p. This relatively low estimate for the overall multiplier fits with the theoretical factors outlined above.

99 See Box 3 for more detail.

100 OBR (2018) Box 3.2 – EFO October 2018. Available at: <https://obr.uk/efo/economic-fiscal-outlook-october-2018/>

101 Batini, N. et al. (2014) *Fiscal Multipliers: Size, Determinants, and Use in Macroeconomic Projects*. IMF. Available at: <https://www.imf.org/external/pubs/ft/tnm/2014/tnm1404.pdf>

102 Ramey, V. (2011) *Can Government Purchases Stimulate the Economy?* Journal of Economic Literature, 49:3. Available at: [doi.org/10.1257/jel.49.3.673](https://doi.org/10.1257/jel.49.3.673)

103 Glocker, C. et al. (2019) *Time-varying fiscal spending multipliers in the UK*. Journal of Macroeconomics, 60. Available at: <https://doi.org/10.1016/j.jmacro.2019.02.003>

104 Cimadomo, J. and Bénassy-Quéré, A. (2012) *Changing patterns of fiscal policy multipliers in Germany, the UK and the US*. Journal of Macroeconomics, 34:3. Available at: <https://doi.org/10.1016/j.jmacro.2012.02.006>

15 105 Office for Budget Responsibility (2018) *Economic and fiscal outlook*. Available at: [https://cdn.obr.uk/EFO\\_October-2018.pdf](https://cdn.obr.uk/EFO_October-2018.pdf)

## Box 4: TME, AME & DEL

Overall public spending in 2018/19 - known as 'total managed expenditure' or TME - was £810bn, or around 38% of GDP.<sup>106</sup> Total managed expenditure is split into departmental expenditure limits (DEL) and annually managed expenditure (AME). These are each split again into resource and capital spending. The text below provides some key details on each.

### DEL

£371bn  
(46% of TME)

This limits departments' spending over a number of years and is allocated during the Spending Review process, which typically occurs every two to three years. It covers items that can be planned, such as staffing costs.

#### Resource DEL

£ 332bn  
(41% of TME)

- This is planned day-to-day spending such as the money that departments spend on staff.
- In 2018/19 the Department of Health and Social Care spend the most on RDEL, followed by Education and Defence.

#### Capital DEL

£62bn  
(8% of TME)

- This is money invested in assets that government then own.
- BEIS and Defence had the highest CDEL spend in 2018/19 but Transport is set to spend the most in 2019/20.
- CDEL spend by the Ministry of Housing, Communities and Local Government is also set to increase.

### AME

£439bn  
(54% of TME)

This spending cannot easily be subject to multi-year limits, as amounts are often out of departments' direct control. For instance, social security benefits are determined by the wider economy.

#### Resource AME

£396bn  
(49% of TME)

- This is split into departmental and other.
- Departmental AME is included in departments' budgets. Most money is spent on social security benefits and public service pensions.
- Other AME includes the interest on government debt and accounting adjustments.

#### Capital AME

£20bn  
(2% of TME)

- Again, this is split into departmental and other.
- The largest categories of spend are student loans (departmental) and locally financed spending.

106 HM Treasury (2019) *Public Expenditure Statistical Analyses 2019*. Available at: <https://www.gov.uk/government/collections/public-expenditure-statistical-analyses-pesa>



## How the spending system affects social infrastructure investment

As Chapter 2 demonstrates, there is a strong economic case for investing in social infrastructure, yet under the current system, these returns are often overlooked, leading to a sub-optimal allocation of public resources. A number of factors are to blame, and these are discussed in more detail below.

*1. Spending allocations are subject to political influence, yet the economic impacts of social infrastructure investment are not widely understood by politicians or policymakers*

Due to its cross-cutting nature, the Treasury plays an essential role in the strategic allocation of public funds, yet their published tools appear ill-suited to this purpose. Both the UCL's Institute for Innovation for Public Purpose and economists Diane Coyle and Marianne Sensier have argued that Green Book analysis does not account for the GDP impacts of large-scale, non-marginal projects with the potential to transform society. One recent IIPP paper finds particularly large GDP returns to 'mission-oriented' government spending where policies 'shift incentives across multiple sectors'.<sup>107</sup>

The Green Book discourages the inclusion of multiplier effects, arguing that these are rarely additional and are 'generally already accounted for by the decision to spend at a particular level'.<sup>108</sup> This implies that impacts on the economy are considered informally at some other point in the system, yet there is little evidence to suggest this process occurs during the Spending Review, beyond the 0.3% OBR multiplier on expenditure as a whole. It appears a stage in the process is missing, or at least not visible to the public. The Green Book informs the allocation of spend within departments and the OBR's EFO informs the Treasury's decisions on the overall level of expenditure but the appropriate tools for allocating spend across departments and major investments at the Spending Review are absent from the public sphere.

Yet politicians and policymakers recognise the value of transformational investments and in the absence of suitable tools for analysis, political influence becomes an important part of the decision-making process. The scope for political influence highlights the importance of the arguments for investment being well understood by policymakers and politicians. Thanks to a decade of research and discussion, the long-term economic benefit of investing in transport infrastructure is well

understood; so too must the economic benefits of investing in social infrastructure.

The scope for political influence highlights the importance of the arguments for investment being well understood by policymakers and politicians

*2. Social infrastructure is by nature cross-cutting whilst department allocations are not*

The benefits of social infrastructure are often broad-based or do not accrue to the same department that makes the investment. For instance, the 2007 King's Fund paper highlights that whilst there are likely to be net savings from increasing access to mental health treatments, the benefits do not accrue to primary care trusts, who fund the costs of care.<sup>109</sup> This can discourage investment in social infrastructure as planned spend is typically allocated to individual departments rather than to projects or policy areas. Ministers 'jostle' with the Treasury and each other for small increases in budget and whilst Accounting Officers have a responsibility to promote value for the whole public sector, genuine cross departmental working is limited.<sup>110</sup>

The interaction and interdependencies between various types of social infrastructure and the local economy mean that a place-based perspective is often essential for the efficient allocation of investment. For instance, education has been found to have an impact on health behaviours that cannot be explained by income and skills provision.<sup>111</sup> The cross-cutting benefits of social infrastructure may be better accounted for by place-based budgeting where local leaders can strategically coordinate spending and investment in social and physical infrastructure. The Combined Authority structure is well-suited for greater spending control, being introduced for this purpose in 2011 and Greater Manchester Combined Authority's health and social care devolution is one example of a vehicle for pooled service budgets.<sup>112</sup> However, it will not be the right fit for all combined authority areas. Most local and combined authorities do not have the resources available to take on this challenge; the LGA report that local authorities will have seen a £16bn reduction in core funding over the last decade, despite shouldering increasing demand for adult

<sup>107</sup> Deleidi, M., et al. (2019) op cit.

<sup>108</sup> Coyle, D. & Sensier, M. (2018) The Imperial Treasury. Available at: [https://www.bennettinstitute.cam.ac.uk/media/uploads/files/The\\_Imperial\\_Treasury\\_appraisal\\_methodology\\_and\\_regional\\_economic\\_performance\\_in\\_the\\_UK.pdf](https://www.bennettinstitute.cam.ac.uk/media/uploads/files/The_Imperial_Treasury_appraisal_methodology_and_regional_economic_performance_in_the_UK.pdf)

<sup>109</sup> The King's Fund (2007) op cit

<sup>110</sup> IFG (2019) op cit.

<sup>111</sup> Scheffler, R. et al., (2010) Social capital, human capital and health what is the evidence? Available at: <https://www.oecd.org/innovation/research/45760738.pdf>

<sup>112</sup> The Greater Manchester health and social care partnership followed the Total Place pilots of 2009-2010 which aimed to create a 'whole area' approach to public services, which was both more efficient and effective. Total Place was discontinued in 2010 but more information can be found at the Leadership Centre website: <https://www.leadershipcentre.org.uk/totalplace/>. The King's Fund have also published an assessment of the value of Total Place pilots of healthcare provision which can be found at: <https://www.kingsfund.org.uk/sites/default/files/place-based-approaches-nhs-seminar-highlights-richard-humphries-sarah-gregory-kings-fund-october-2010.pdf>



social care from an ageing population.<sup>113</sup> Greater local control over budgets is currently being piloted with the 75% business rate retention scheme and this could be one opportunity to test place-based social infrastructure investment appraisal models.<sup>114</sup> CPP will be publishing a paper on local government finance following the mayoral election in May and will be working with others on the Future of Devolution later this year.

## The interaction between social infrastructure and the local economy means that a place-based perspective is essential for the efficient allocation of investment

### 3. *The time horizon for government planning is too short to account for the benefits of social infrastructure*

Consideration of long-term benefits is central to building and maintaining high quality social infrastructure, as it often requires sustained investment for returns which are realised years later. For instance, the economic evaluation of Sure Start childcare centres acknowledged that the majority of benefits were not expected until 15 years after the intervention, by which time the programme was being wound down. A 10-15 year time horizon for the government's investment strategy would have enabled policymakers to account for these benefits, but this is not possible under the current Spending Review process, which refreshes every few years in response to four to five-year political cycles. Wales has tried to protect policies from the political cycle by introducing the Well-being of Future Generation Act 2015, which requires public bodies to think about the long-term impact of their decisions and a similar bill for the UK was proposed in the Lords under the previous government.<sup>115</sup> Another way of dealing with short time horizons would be to encourage investment in prevention by considering life cycle outcomes that we know to affect future economic outcomes, such as school readiness at age 5, as key economic indicators.<sup>116</sup> Public Health England have recently worked with the Chartered Institute of Public Finance and Accountancy

to improve the evaluation of preventative investments by highlighting longer term costs and benefits to incentivise preventative spend.<sup>117</sup>

### 4. *Government expenditure is allocated without recognition of the assets created*

The government's short-term outlook is exacerbated by the fact that spend is allocated using the RAB accounting system which does not include assets or future liabilities; see Box 5 for more detail. The OBR consider the WGA in their fiscal sustainability report, but it is not widely used to inform spending decisions. In their recent report *Totally (net) worth it*, the Resolution Foundation discuss the need to "recognise the value, quality and performance of [public] assets" and suggest that government consider net worth in place of net debt.<sup>118</sup> Even the WGA, which covers all public assets and liabilities, often undervalues or does not include physical social infrastructure assets such as housing or public land; economist Stewart Lansley and his colleagues estimate that "the government has undervalued public sector wealth by up to £1tn".<sup>119</sup> Updating the WGA to better include these and then using it to plan future spend would help policymakers to account for increases to the public asset base through social infrastructure investment.

### 5. *Much social infrastructure is not physical capital*

The government gets around short time horizons by prioritising investment in capital, which is better understood to have long-term returns. In the run up to the 2019 election, both the Labour and Conservative parties proposed to permit borrowing for capital investment and since then the Prime Minister has announced several capital investments, including £40m for superfast broadband infrastructure in rural areas.<sup>120</sup> Yet whilst social infrastructure includes physical assets such as buildings, it is primarily made up of human capital, social capital, and services, which do not count as capital expenditure. This means that social infrastructure projects miss out on funding and has led them to be cast as a cost to the taxpayer to be paid out of the proceeds of economic growth, rather than a determinant of that growth. This is short-sighted. The swing from preventative investment to disinvestment and back again that the UK has seen under successive

113 LGA, (2018) *Local government funding Moving the conversation on*. Available at: [https://www.local.gov.uk/sites/default/files/documents/5.40\\_01\\_Finance%20publication\\_WEB\\_0.pdf](https://www.local.gov.uk/sites/default/files/documents/5.40_01_Finance%20publication_WEB_0.pdf)

114 See the online prospectus for more information, available at: <https://www.gov.uk/government/publications/75-business-rates-retention-pilots-2019-to-2020-prospectus>

115 For more detail on the proposed bill see: <https://services.parliament.uk/bills/2019-19/wellbeingoffuturegenerations.html>

116 For more detail on the benefits of school readiness see: Unicef, (2012) *School Readiness and Transitions*. Available at: [https://www.unicef.org/publications/files/CFS\\_School\\_Readiness\\_E\\_web.pdf](https://www.unicef.org/publications/files/CFS_School_Readiness_E_web.pdf)

117 CIPFA & PHE (2019) *Evaluating preventative investments in public health in England*. Available at: <https://www.hsj.co.uk/download?ac=3041414>

118 Resolution Foundation (2019), *Totally (net) worth it, The next generation of UK fiscal rules*. Available at: <https://www.resolutionfoundation.org/publications/totally-net-worth-it/>

119 Lansley, S. et al, (2018), *Remodelling Capitalism: How Social Wealth Funds could transform Britain*. Available at: <https://www.friendsprovidentfoundation.org/library/resources/remodelling-capitalism-social-wealth-funds-transform-britain/>

120 The Telegraph (2019), *Boris Johnson to announce glut of infrastructure projects to appease HS2 critics*. Available at: <https://www.telegraph.co.uk/politics/2020/02/09/boris-johnson-announce-glut-infrastructure-projects-appease/>

governments over the last 30 years has coincided with increased reactive spending on fixed benefits such as worklessness and disability benefit and housing benefits in some areas.<sup>121</sup> Considering the broader picture when borrowing for capital investment, and setting aside funds for the non-capital elements of social infrastructure would help to break this cycle.

*6. Productivity impacts are less commonly included in appraisals of social infrastructure projects*

Economists Diane Coyle and Marianne Sensier have welcomed the steps taken by the 2018 Green Book to include productivity benefits, bringing it in line with existing departmental appraisal guidance such as the Department for Transport's *Transport Analysis Guidance*, but say that these do not go far enough.<sup>122</sup> The updated advice on accounting for productivity impacts is welcome but lacks detail, which needs to be filled in by departments' and agencies' own guidance. These documents, such as the Department of Health and Social Care's (DHSC) *Comprehensive Investment Appraisal (CIA) Model and guidance*, and the Home and Communities Agency's *Additionality Guidance*, are influential yet have not necessarily been updated in line with the Green Book and differ in their advice on accounting for economic impacts. DHSC's *CIA guidance*, for example, does not discuss wider economic impacts at all, whereas DfT's *Transport Analysis Guidance* has a whole document covering these. Where productivity is discussed in other guidance documents it is often not related back to the wider economy. This imbalance affects the way that projects are assessed and reinforces the framing of social infrastructure as 'soft' and external to the growth process, diminishing its perceived importance.

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<sup>121</sup> This refers to New Economy analysis on the changing profile of spend in Greater Manchester between 2008/9 and 2013/14. Available in the RSA Commission on Inclusive Growth's final report: [https://www.thersa.org/globalassets/pdfs/reports/rsa\\_inclusive-growth-commission-final-report-march-2017.pdf](https://www.thersa.org/globalassets/pdfs/reports/rsa_inclusive-growth-commission-final-report-march-2017.pdf)

<sup>122</sup> Coyle, D. & Sensier, M. (2018) Op cit

### Box 5: Assets and liabilities in government accounting

The UK uses three accounting systems: the national accounts, the whole of government accounts (WGA) and the resource accounting and budgeting accounts (RAB). RAB is used to control departmental spending and does not measure assets or debt. The national accounts cover the entire economy, including GDP and sector accounts. The WGA is a wide-ranging statement of public sector finances, including local government, as well as central government and the Bank of England. Unlike the national accounts, it incorporates long-term revenue and expenditure. There is also a statement of cash flows and a statement of recognised gains and losses.<sup>123</sup> This makes it the most comprehensive overview of public sector assets and liabilities available to the government.

The WGA balance sheet allows the government to track publicly owned assets – such as taxes due and forex reserves - and theoretically measure returns to capital stock such as transport infrastructure. In practice, there are little data available on such returns, either in terms of external benefits (e.g. via increased productivity) or in terms of effective public service delivery.<sup>124</sup> Balance sheet perspectives, looking at potential liabilities such as pension obligations and tax refunds, and returns on investment are still broadly absent from the government’s financial management.<sup>125</sup>

The government’s fiscal rules are instead focused on financial flows (revenue, expenditure and borrowing) from the national accounts. The House of Commons Committee of Public Accounts wrote in its 2019 report: “we continue to be concerned that the time it takes to produce means that the WGA is still not achieving its potential as a tool for making decisions about the public finances.”<sup>126</sup>

### Box 6: Multiplier effects, cost benefit ratios and ‘wider economic impacts’

A multiplier calculates the aggregate net benefit to the economy from public spending. This macro economy gain is usually measured by changes to national output, or GDP. The OBR applies a fiscal multiplier of 0.3 to changes in overall public spending and Box 3 above provides more information on the factors that affect the size of a multiplier.

At project level, public investments are approved on the basis of business cases. The economic section of these outlines the rationale for the investment and should calculate the economic costs and benefits associated with several viable options. These are commonly presented as a benefit to cost ratio, or BCR, which demonstrates the gain for each unit of financial cost and when high represents net gain to society of an investment over time.<sup>127</sup>

The primary difference between these two ratios is that whilst the multiplier captures the impact of government spending on GDP, the BCR calculates the welfare gain from spend. These differences are summarised in the table below.

Cost-benefit analysis (BCR)	Multiplier effect
Net effect	Net effect
Measured by utility or welfare gain of society	Usually measured by GDP $GDP = G + I + C + (IM - X)$
Can include indirect effects, but often does not	Includes indirect effects
Is the ratio of the present value of costs and benefits over a given period – usually 10 years	Considered to peak in year two and then taper over time

Whilst indirect effects can be captured through economic welfare analysis, they are not usually included in business cases. This is because the Treasury considers individual projects to be too small to influence GDP.<sup>128</sup> Where government appraisal literature refers to the effect of investments on GDP, it often calls these ‘wider economic impacts’ as these are not captured in the direct economic benefits to the users. Productivity impacts such as agglomeration impacts are included as wider economic impacts.

123 Better Government Series (2017): *Managing the Public Balance Sheet*. The Institute of Chartered Accountants. Available at <https://www.icaew.com/-/media/corporate/archive/files/about-icaew/what-we-do/policy/public-finance/policy-insight-managing-the-public-balance-sheet.ashx>

124 Ibid.

125 Tang et al. (2019) *Reviewing the UK Balance Sheet – Proving its (Net) Worth*. IMF: Public Financial Management blog. Available at <https://blog-pfm.imf.org/pfmblog/2019/06/reviewing-the-uk-balance-sheet-proving-its-net-worth.html>

126 House of Commons Committee of Public Accounts (2019) *Whole of Government Accounts: Seventy-Fourth Report of Session 2017–19*. Available at <https://publications.parliament.uk/pa/cm201719/cmselect/cmpubacc/464/464.pdf>

127 BCRs are calculated using the net present value of costs and benefits over a given period, discounted in line with the Treasury’s Green Book guidance.

128 HM Treasury, (2018) Op cit

## Conclusion

CPP has long advocated for inclusive growth, achieved by the integration of economic and social policy, and a focus on the level of place in policy and investment decision making. This paper sets out why investment in social infrastructure should be considered alongside more traditional economic infrastructure as a tool for regional rebalancing.

Social infrastructure is increasingly being recognised as an idea whose time has come. Numerous organisations are discussing its importance and the government has recognised the need to spend on youth services and civic infrastructure, particularly in areas that have been ‘left behind’. Even the International Monetary Fund, traditionally associated with a more conservative brand of economics, agrees that social infrastructure can be “an important catalyst for economic growth”.<sup>129</sup>

Whilst it can be difficult to compare estimates on the productivity impacts of social infrastructure investments, it is clear that the benefits from improving the efficiency and increasing the supply of labour have the potential to be large. Based on the available evidence, the productivity benefits from social infrastructure investment appear to be of a similar order of magnitude to those from transport infrastructure investment.

It is hoped that this paper contributes to policymakers understanding of social infrastructure’s economic potential

Yet the structure of the public spending system means that the economic returns to social infrastructure are often overlooked. This is for a number of reasons, including that: much social infrastructure is not physical capital, productivity impacts are less commonly included in appraisals of social infrastructure projects, and that spending allocations are subject to political influence, yet the economic impacts of social infrastructure investment are not widely understood by politicians or policymakers. In the longer term, the government must recognise that it needs new tools for assessing transformational spend and work on developing these. In the shorter term, it is hoped that this paper contributes to policymakers understanding of social infrastructure’s economic potential, particularly ahead of Spending Review 2020.

With this in mind, we suggest the following high-level principles for a more integrated approach to public spending:

- 1 Taking a place-based approach.** Government should trial a move to place-based rather than departmental budgeting where local leaders can have full flexibility and accountability. The current business rate retention pilots could provide a platform for testing new models of appraisal for social infrastructure projects.<sup>130</sup> CPP will be publishing a paper on local government finance following mayoral elections in May and working alongside other organisations on the Future of Devolution later this year.
- 2 Considering the long-term.** Investment strategy should be set over a 10-15 years period rather than the current two to four. The five-year rail control periods implemented by the Department for Transport, effectively allow a 10-year lead period and could provide a useful model for wider investment.<sup>131</sup>
- 3 Accounting for assets.** Government should report changes in assets, as measured by the Whole of Government Accounts, alongside traditional economic measures at the Budget and use the WGA to inform long-run spending decisions.
- 4 Thinking beyond capital.** Investment in the non-capital elements of social infrastructure should be on an equal footing with capital investment. Government could, for example, introduce a new category in government accounting to capture resource spending which is preventative and/or has predominantly long-term benefits.
- 5 A level playing field for project appraisal.** Departmental guidance should be updated in line with the 2018 Green Book and should include or reference advice on estimating the productivity impacts of social infrastructure. The level of detail should be on a par with current WebTAG guidance. This would encourage the inclusion of productivity impacts, including labour supply effects, in the appraisal of social infrastructure projects on a routine basis.

CPP call on the Treasury to both articulate how it will address the issues highlighted in this report and outline a plan for investing in social infrastructure in order to address regional inequalities and achieve shared and sustained prosperity.

129 IMF (2015) *Why Public Investment Matters*. Available at <https://www.imf.org/external/np/fad/publicinvestment/>

130 For more information on existing pilots see: <https://www.gov.uk/government/publications/75-business-rates-retention-pilots-2019-to-2020-prospectus/frequently-asked-questions>

131 House of Commons Transport Committee (2018) *Rail infrastructure investment Fourth Report of Session 2017-19*; Available at: <https://publications.parliament.uk/pa/cm201719/cmselect/cmtrans/582/582.pdf>

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